

#6



OIPE

RAW SEQUENCE LISTING

DATE: 05/31/2002

PATENT APPLICATION: US/10/029,180

TIME: 08:27:25

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw

ENTERED

```

3 <110> APPLICANT: Cali, Brian M.
4      Holtzman, Doug
5      Madden, Kevin T.
6      Milna, G. Todd
7      Sherman, Amir
8      Silva, Jeffry C.
9      Trueheart, Josh
10     Zhang, Lixin
12 <120> TITLE OF INVENTION: Novel Regulators of Fungal Gene Expression
14 <130> FILE REFERENCE: MIC-004
16 <140> CURRENT APPLICATION NUMBER: US 10/029,180
17 <141> CURRENT FILING DATE: 2001-12-22
19 <150> PRIOR APPLICATION NUMBER: US 60/257,431
20 <151> PRIOR FILING DATE: 2000-12-22
22 <160> NUMBER OF SEQ ID NOS: 138
24 <170> SOFTWARE: FastSEQ for Windows Version 4.0
26 <210> SEQ ID NO: 1
27 <211> LENGTH: 1719
28 <212> TYPE: DNA
29 <213> ORGANISM: Artificial Sequence
31 <220> FEATURE:
32 <223> OTHER INFORMATION: fungal gene
34 <400> SEQUENCE: 1
35 atgggcacta cctcagtg catcatctgt cctggacagc cgcagttcag cgatgtctcc 60
36 cacctgttga cccatgctgc ctccaaggct catttggcca accacttcaa gctcaagctt 120
37 cgcaccgacg atcctaactc ggtcaagctt ctcgagcgat acgaccagtg gtttgataac 180
38 aatggcttcg cgaagctgct gtctgctcgc atggcaagca aagaaagtcg gaagaaaaga 240
39 aaggacgaag catcgacttc caacaccacc aaacgcacaa ggagccaagc atccatcggtg 300
40 gagaccgagg gctccagcac tcttgcaatg ccagccaccc ccaaccctga ttaccttgat 360
41 cctcgcttgg ccgatttctc caatgacaac cagcaacatg cgggtacaac cctcgcagca 420
42 agcatcccaa accagttgcc tacggcgaac agcagtgcca aaactcgaac tgggtccgacc 480
43 ctccgcttgt tgcgatcgtc taatggcaca aagtcgaatg ttttgccgcc tgttaatgct 540
44 tctgacctct acgatgaaag ccaatcattg gctttgccta agacaccgat acagcgcta 600
45 cacgaaccgg gacctttgga gacaacattg attaccaacg aagacactcc tgatcctttt 660
46 gtcgactctg gtgatcaaac ccaggcatcg gctgaggctg agatggacaa gactcgggct 720
47 gaagaaatct caagactcaa gggcgttcta taccagga tggaattttt tgattccgcc 780
48 actgtgcaga tgcgtcgtcg gcgcaaccag aagaaggaca gtggtgtact gaagaccatg 840
49 gaagaaactt ccttgctcgt ggagccttca gacaggtctt attcccctgg cggaactctg 900
50 ttgacggagc gtatgatcac gggcaatgtg gaggactaca gccactgaa aggagagact 960
51 ccgattccca agggaggcct cactcgtaac aggagcacac gtctgaccaa ggctgatccc 1020
52 aacgtgtccc gtgcgcgga cagaaagcga cagaaaacgg acaaagaccg caagaacatg 1080
53 gcagatgaag gggccaacga agagcacacg tcttcccgcc gctcgcgccg cgcagcagct 1140
54 cactcttatg ttggtgacga tgaagagatt ggtcttactg tgaacacctt tggcaaacgg 1200

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,180

DATE: 05/31/2002

TIME: 08:27:25

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw

```

55 cccaggggtg gcttcgacgt ttttgttgat gagagaaagg aagaagagga cagcaaaaca 1260
56 acttatcagc aaccgggatt cagagcgcag tttgacacat tgacccccac tcgccttggt 1320
57 ttgaacggaa agaccaacgc tggcattcat gccccgagaa ttggacacgc atcccttgcc 1380
58 aaagagaaca ttgagcctat tctgaacccc caaggctcgaa ttgcccccca cggttggaac 1440
59 tccccattcg ttaaataccc tgactccgat gactttggat tcggccccctc atacccttct 1500
60 gatcttggtg atacatatga cacccttgac aaggetgggt atcgatccaa cctctgcaa 1560
61 gctccctcga agcaccctt ctatgagagc cagtatgaag aggagcatac tgcagcccag 1620
62 aatggctggc ttccagtga ccagatagtt ccatccgacg taaccatccc cgaagacgac 1680
63 cagatcttct caacatacta cttttctacc gatgtgaac 1719
65 <210> SEQ ID NO: 2
66 <211> LENGTH: 573
67 <212> TYPE: PRT
68 <213> ORGANISM: Artificial Sequence
70 <220> FEATURE:
71 <223> OTHER INFORMATION: fungal gene
73 <400> SEQUENCE: 2
74 Met Gly Thr Thr Leu Glu Cys Ile Ile Cys Pro Gly Gln Pro Gln Phe
75 1 5 10 15
76 Ser Asp Val Ser His Leu Leu Thr His Ala Ala Ser Lys Ala His Leu
77 20 25 30
78 Ala Asn His Phe Lys Leu Lys Leu Arg Thr Asp Asp Pro Asn Ser Val
79 35 40 45
80 Lys Leu Leu Glu Arg Tyr Asp Gln Trp Phe Asp Asn Asn Gly Phe Ala
81 50 55 60
82 Lys Leu Leu Ser Ala Arg Met Ala Ser Lys Glu Ser Arg Lys Lys Arg
83 65 70 75 80
84 Lys Asp Glu Ala Ser Thr Ser Asn Thr Thr Lys Arg Thr Arg Ser Gln
85 85 90 95
86 Ala Ser Ile Val Glu Thr Glu Gly Ser Ser Thr Pro Ala Met Pro Ala
87 100 105 110
88 Thr Pro Asn Pro Asp Tyr Leu Asp Pro Arg Leu Ala Asp Ser His Asn
89 115 120 125
90 Asp Asn Gln Gln His Ala Gly Thr Thr Leu Ala Ala Ser Ile Pro Asn
91 130 135 140
92 Gln Leu Pro Thr Ala Asn Ser Ser Ala Lys Thr Arg Thr Gly Pro Thr
93 145 150 155 160
94 Leu Arg Leu Leu Arg Ser Ser Asn Gly Thr Lys Ser Asn Val Leu Pro
95 165 170 175
96 Pro Val Asn Ala Ser Asp Leu Tyr Asp Glu Ser Gln Ser Leu Ala Leu
97 180 185 190
98 Pro Lys Thr Pro Ile Gln Arg Leu His Glu Pro Gly Pro Leu Glu Thr
99 195 200 205
100 Thr Leu Ile Thr Asn Glu Asp Thr Pro Asp Pro Phe Val Asp Ser Gly
101 210 215 220
102 Asp Gln Thr Gln Ala Ser Ala Glu Ala Glu Met Asp Lys Thr Arg Ala
103 225 230 235 240
104 Glu Glu Ile Ser Arg Leu Lys Gly Val Leu Tyr Pro Gly Met Asp Ile
105 245 250 255
106 Phe Asp Ser Ala Thr Val Gln Met Arg Arg Arg Asn Gln Lys Lys

```

RAW SEQUENCE LISTING

DATE: 05/31/2002

PATENT APPLICATION: US/10/029,180

TIME: 08:27:25

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw

```

107          260          265          270
108 Asp Ser Gly Val Leu Lys Thr Met Glu Glu Thr Ser Leu Leu Val Glu
109          275          280          285
110 Pro Ser Glu Gln Val Tyr Ser Pro Gly Gly Thr Leu Leu Thr Glu Arg
111          290          295          300
112 Met Ile Thr Gly Asn Val Glu Asp Tyr Ser Pro Leu Lys Gly Glu Thr
113 305          310          315          320
114 Pro Ile Pro Lys Gly Gly Leu Thr Arg Thr Arg Ser Thr Arg Leu Thr
115          325          330          335
116 Lys Ala Asp Pro Asn Val Ser Arg Ala Ala Asp Arg Lys Arg Gln Lys
117          340          345          350
118 Thr Asp Lys Asp Arg Lys Asn Met Ala Asp Glu Gly Ala Asn Glu Glu
119          355          360          365
120 His Thr Ser Ser Arg Arg Ser Arg Arg Ala Ala Ala His Ser Tyr Val
121          370          375          380
122 Gly Asp Asp Glu Glu Ile Gly Leu Thr Val Asn Thr Phe Gly Lys Arg
123 385          390          395          400
124 Pro Arg Gly Gly Phe Asp Val Phe Val Asp Glu Arg Lys Glu Glu Glu
125          405          410          415
126 Asp Ser Lys Thr Thr Tyr Gln Gln Pro Gly Phe Arg Ala Gln Phe Asp
127          420          425          430
128 Thr Leu Thr Pro Thr Arg Leu Val Leu Asn Gly Lys Thr Asn Ala Gly
129          435          440          445
130 Ile His Ala Pro Arg Ile Gly His Ala Ser Leu Ala Lys Glu Asn Ile
131          450          455          460
132 Glu Pro Ile Leu Asn Pro Gln Gly Arg Ile Ala Pro His Gly Trp Asn
133 465          470          475          480
134 Ser Pro Phe Val Lys Tyr Pro Asp Ser Asp Asp Phe Gly Phe Gly Pro
135          485          490          495
136 Ser Tyr Leu Pro Asp Leu Gly Asp Thr Tyr Asp Thr Leu Asp Lys Ala
137          500          505          510
138 Gly Tyr Arg Ser Asn Pro Leu Gln Ala Pro Ser Lys His Pro Phe Tyr
139          515          520          525
140 Glu Ser Gln Tyr Glu Glu Glu His Thr Ala Ala Gln Asn Gly Trp Leu
141          530          535          540
142 Pro Val Asp Gln Ile Val Pro Ser Asp Val Thr Ile Pro Glu Asp Asp
143 545          550          555          560
144 Gln Ile Phe Pro Thr Tyr Tyr Phe Ser Thr Asp Val Asn
145          565          570
148 <210> SEQ ID NO: 3
149 <211> LENGTH: 939
150 <212> TYPE: DNA
151 <213> ORGANISM: Artificial Sequence
153 <220> FEATURE:
154 <223> OTHER INFORMATION: fungal gene
156 <400> SEQUENCE: 3
157 atggcactaa tcactcgcaa atacggcgag atccgccaga tcacaggcct gagcgaccac 60
158 gctgtgatcc tccagtcgca taaagtcag tactgccgcg cgctggatcg ctactatgcc 120
159 atcaaggtct ttgcgcgacg tcccggtcag agcacggacg agtacacaaa acaagtcaat 180

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,180

DATE: 05/31/2002

TIME: 08:27:25

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw

```

160 gcgaggttcg cgcgtcgtcg caatctgcac caccagcacg tcgtctcgac ctcgaactc 240
161 ctcccatcg gcgaggaaa tctagccgct tgcattggagt actgtgcggg tggggatctt 300
162 cactccctga tcacggctgg tccctcgcac agattaccct cggaagaggc agactgtctt 360
163 ttcaagcagc ttcttcgtgg catctcctac cttcacaaat caggcatcgc ccaccgcgac 420
164 ctgaagccgg agaacctcct cctgacacac agggccttgcc tcaagatctc agactttgcg 480
165 aatgccgagc ggcgtccgttt cgtatggtgat gattctcagc atgccaatga cctggcgga 540
166 actgaacgcc gcagcttaga accgacaccg tatcttgccc cggagcgata ccttgacgag 600
167 ggcgacaggt acatgtccag atccgacccc agagccctcg atatctgggc cgcgctgtt 660
168 atatactcg ctatgaggac aggaaggaa ctgtggaaag cggcaacgga gaaggacgag 720
169 ggcttcaggg cgtatgtcga agagcgtaag gccgagaaga cgaatactgt tatccaggat 780
170 tcgtgccatg aacggggccg caaagtata tacgccatgt taagcactga tcctgggaag 840
171 cgacctatcg cgactgagat tctttcctca gactggcttc agaacattga ctgctgtatc 900
172 tttgatcatt cccaagcaga gtctaattga ttttcggcc 939
174 <210> SEQ ID NO: 4
175 <211> LENGTH: 313
176 <212> TYPE: PRT
177 <213> ORGANISM: Artificial Sequence
179 <220> FEATURE:
180 <223> OTHER INFORMATION: fungal gene
182 <400> SEQUENCE: 4
183 Met Ala Leu Ile Thr Arg Lys Tyr Gly Glu Ile Arg Gln Ile Thr Gly
184 1 5 10 15
185 Leu Ser Asp His Ala Val Ile Leu Gln Ser His Lys Val Gln Tyr Cys
186 20 25 30
187 Pro Pro Leu Asp Arg Tyr Tyr Ala Ile Lys Val Phe Arg Arg Ser Pro
188 35 40 45
189 Gly Gln Ser Thr Asp Glu Tyr Thr Lys Gln Val Asn Ala Glu Phe Ala
190 50 55 60
191 Val Val Ala Asn Leu His His Gln His Val Val Ser Thr Phe Glu Leu
192 65 70 75 80
193 Leu Pro Ile Gly Gly Gly Asn Leu Ala Ala Cys Met Glu Tyr Cys Ala
194 85 90 95
195 Gly Gly Asp Leu His Ser Leu Ile Thr Ala Gly Pro Ser His Arg Leu
196 100 105 110
197 Pro Ser Glu Glu Ala Asp Cys Leu Phe Lys Gln Leu Leu Arg Gly Ile
198 115 120 125
199 Ser Tyr Leu His Lys Ser Gly Ile Ala His Arg Asp Leu Lys Pro Glu
200 130 135 140
201 Asn Leu Leu Leu Thr His Arg Ala Cys Leu Lys Ile Ser Asp Phe Ala
202 145 150 155 160
203 Asn Ala Glu Arg Val Arg Phe Asp Gly Asp Asp Ser Gln His Ala Asn
204 165 170 175
205 Asp Leu Ala Glu Thr Glu Arg Arg Ser Leu Glu Pro Thr Pro Tyr Leu
206 180 185 190
207 Ala Pro Glu Arg Tyr Leu Asp Glu Gly Asp Arg Tyr Met Ser Arg Ser
208 195 200 205
209 Asp Pro Arg Ala Leu Asp Ile Trp Ala Ala Ala Val Ile Tyr Val Ala
210 210 215 220
211 Met Arg Thr Gly Arg Asn Leu Trp Lys Ala Ala Thr Glu Lys Asp Glu

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/029,180

DATE: 05/31/2002

TIME: 08:27:25

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw

```

212 225          230          235          240
213 Gly Phe Arg Ala Tyr Val Glu Glu Arg Lys Ala Glu Lys Thr Asn Thr
214          245          250          255
215 Val Ile Gln Asp Ser Cys His Glu Arg Gly Arg Lys Val Ile Tyr Ala
216          260          265          270
217 Met Leu Ser Thr Asp Pro Gly Lys Arg Pro Ile Ala Thr Glu Ile Leu
218          275          280          285
219 Ser Ser Glu Trp Leu Gln Asn Ile Asp Cys Cys Ile Phe Asp His Ser
220          290          295          300
221 Gln Ala Glu Ser Asn Gly Phe Ser Ala
222 305          310
225 <210> SEQ ID NO: 5
226 <211> LENGTH: 1512
227 <212> TYPE: DNA
228 <213> ORGANISM: Artificial Sequence
230 <220> FEATURE:
231 <223> OTHER INFORMATION: fungal gene
233 <400> SEQUENCE: 5
234 atgactgagc gctcagttca gatctggttt caaaacaggc gcgcaaagat caagatgctt 60
235 gcgaagaaga gcatcgagac cggcgagggc tgtgattcaa ttcccagatc aatgcgccag 120
236 tacttagcca tgcagttcga tcccagcaaa cccggtgctc gagaccctt tggccgaact 180
237 ggcggatacg gagcaaatgg tgcataccct aatgagccaa caccttcagg caaagttgtg 240
238 atccatcact ttacctgtcg atccctgaca attggcagct ggaggcggat cggacaaaat 300
239 gccatggacc tggttgtttt ctactcccc gagaaaggcg gcatgacctt ctatatcaac 360
240 aacgacgcag ccgatacaaa aatcgaatat cccttctcct acatcaagaa cttacactt 420
241 gagtccggcg atcaaggacc gcagcccaac ggtgcgcctc cacggcctac tggctcgtc 480
242 gttgaattga accgaccgcc cctcttttac atggattcct ccaactcggg tggtttctac 540
243 cagtgcggcg actttacgga agaccaacaa gctagctcgg taatgattca tgccttggc 600
244 ggacacccca aggttctgag cgttcaactt gcaaaattgg tgtctctgga gtctttccag 660
245 aaccgtctcg cgtatggcaa ctcccggca aacaactcta tgcgccgcc ttctattcaa 720
246 cgcccagctt cgcagccaaa tcaattcgcc cctgcttita tgagtatgta tgcggagaat 780
247 ccggccgtga tgaacctcca agctgcccggt ggacacaagc gtcaaagaag ccgctccggt 840
248 ccgctggcta tcgatttctc cgcactagga gcgccaatga ccagttcag catgccacaa 900
249 gctcaacaat tcagccaggc tgattcggga atatacgcgc ctatacccca gtcgacacac 960
250 tcaattgctg cgaacctccg cattgatacc tcttctggat atgccttcga cccgcgtgca 1020
251 caccocatgt cggctactac aactgcgtct ccgtccgatt ttgctagccc tgccctgttt 1080
252 agcgcaggac cccaagggga ttcgactccg gtagggagtg taggagctca gtttactttg 1140
253 ccctatgttt cgcgcgtgtg ggactcaggc gtatccactc aagcagcttc ccatactcg 1200
254 aatgtaagcc atgttgatcc tatgatcgcg aaccattcgc ctctttgac aaatatgtcg 1260
255 catactccgc atgacgtgta cggcatggga agcgaacacc aaccagttta cacagaggaa 1320
256 ggtatgccaa tgggcggcgg gatgtacaaa cacataaact tctcgtcggg gcctaccaca 1380
257 gtgggcctcg aaggcaatgc atttgacttg ccgatgcact ccatgtctgg gcatgcttcg 1440
258 ccggcgctcc agggtgacta tcaaggaata gcactggaaa atgtcgatcc gaatgttttg 1500
259 actcccggtc ct
261 <210> SEQ ID NO: 6
262 <211> LENGTH: 504
263 <212> TYPE: PRT
264 <213> ORGANISM: Artificial Sequence
266 <220> FEATURE:

```

VERIFICATION SUMMARY

PATENT APPLICATION: US/10/029,180

DATE: 05/31/2002

TIME: 08:27:26

Input Set : A:\MIC-004.ST25.txt

Output Set: N:\CRF3\05312002\J029180.raw